#### Remarks

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## The rejections under 35 U.S.C. 101

Claim 1 as amended

- 10 Claim 1 as currently amended reads as follows:
  - 1. (currently amended) A graphical user interface for specifying an action to be performed on a field of a record stored in a memory device when a query with which the action is associated returns the record, the query being executed on a processor that has access to the memory device and interacts with the graphical user interface, the graphical user interface comprising:
  - a window containing a table wherein the field of the record has an entry that is selectable by the user, the entry including
  - a first field of the entry that identifies the field of the record to be acted on; and
    - one or more action fields of the entry that, when the user has selected the entry, the user may set to specify the action.

#### In making these rejections, Examiner states that

The language of this claim describes non-functional descriptive material. As such, this raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine, which would result in a practical application producing a concrete, useful and tangible result to form the basis of statutory subject matter under 35 USC 101.

#### Applicant has amended claim 1 to specify

a field of a record stored in a memory device when a query with which the action is associated returns the record, the query being executed on a processor that has access to the memory device and interacts with the graphical user interface

The amendment recites a data structure that is functional and is further stored in a computer readable medium. Support for the amendment can be found on page 5 of Applicant's application as filed in the section with the title, "Overview of the process control system in which the invention is embodied--FIG. 8". The amendment further recites what was implied in the un-amended claim and therefore does not affect the scope of the claim as originally filed.

Since claim 1 as amended now "particularly point[s] out and distinctly claim[s] the subject matter which applicant regards as his invention", so do dependant claims 2-19 and the amendment of claim 1 has therefore overcome Examiner's rejection of claims 1-19 under 35 U.S.C. 112, second paragraph.

## **Drawings**

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A copy of the amended drawings for this application is attached. Changes have been marked in red. Applicant is respectfully traversing the requirement under 37 C.F.R. 1.84(m) that shading be removed from FIGs. 9-17. FIGS. 9-17 are screen shots of a graphical user interface. The black areas indicate highlighted portions of the screen shots. As such, they represent color and are permitted by 37 C.F.R. 1.84's provision that "Solid black shading areas are not permitted, except when use to represent . . . color." (emphasis added) A letter to the Chief Draftsperson accompanies this response.

## **Specification**

A replacement Specification is attached. The replacement Specification is double spaced and has been amended as required by Examiner and to correct typographical errors noted by Applicant. The amendments are marked in the replacement Specification.

#### Rejection of claims 1-19 under 35 U.S.C. 112, first paragraph

In order for a claim to be rejected under 35 U.S.C. 112, first paragraph, the Specification as filed must lack a written description of the invention set forth in the rejected claims. In the present case, claims 1-19 may be rejected under 35 U.S.C. 112, first paragraph, only

if the disclosure of the invention in the application is not sufficient to permit any person skilled in the art to which the invention pertains to make and use the invention.

In his rejection, Examiner states "there is no enablement as to the format/structure of the data structure (the record of the preamble of claim 1 and the fields/subfields populating this record) that is at the core of this invention."

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Applicant's claim 1 is directed to a graphical user interface for specifying an operation to be performed on a field of a record record. The preamble of the claim sets forth

A graphical user interface for specifying an action to be performed on a field of a record stored in a memory device when a query with which the action is associated returns the record, the query being executed on a processor that has access to the memory device and interacts with the graphical user interface.

The field of a "record" of the preamble is a PR record. The description of the PR record can be found at page 15, line 24, line 6 through page 18, line 3 of the Specification. The PR record (833) is shown in FIG. 8 and its relationship to other database tables of the system is shown in FIGs 6 and 7. The GUI of the preamble is shown in FIG. 13 and its relationship to the "record" (833) is further described at page 49 line 15:

An entry has two parts: the first part, 1303, is a field which identifies the field in the PR record which will be affected by the action. The second part 1306 is one or more fields that define the action to be taken on the field identified by field 1303. What fields are in 1306 and how they define the action depend on the kind of action, or put another way, on the type of the values which field 1303 may contain.

It should be immediately apparent that the descriptions of the embodiments at the cited locations fulfill the written description requirement of 35 U.S.C. 112, first paragraph, and that Examiner's rejection of claims 1-19 under 35 U.S.C 112, first paragraph is not sustainable.

Rejection of claims 1-19 under 35 U.S.C. 112, second paragraph

Examiner rejects claims 1-19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As regards claims 1, Examiner states "multiple uses of the term 'field' is confusing, as 'field' refers to different entities within this claim". Applicant has amended claim 1 to further define each use of the term 'field' to include the entity to which the field belongs. Since claim 1 as amended is now addressed to patentable subject matter, so are dependant claims 2-19 and the amendment of claim 1 has therefore overcome Examiner's rejection of claims 1-19.

Examiner further rejects claim 9-14 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner states the claim language of claim 9 "is convoluted. It is unclear what field value is affecting what other field value, whether a user is setting only action fields or action fields and a reference field operation value, and whether "current" is before or after the user sets field value(s)."

Claim 9 as amended

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Claim 9 as amended reads as follows:

9. (currently amended) The graphical user interface set forth in claim 1 wherein:

the user may set the action fields to specify a reference field which is another field in the record and a reference field operation by which a new value for the identified field may be computed from a current value of the reference field, the current value being the value that the reference field has when the record is returned from the query.

In claim 9, the "reference field" is "another field in the record" and therefore different from the "identified field", which is claim 1's "field of the record" that is identified by the "first field of the entry" Applicant believes that when claim 9 is read in the context of claim 1, from which it is directly dependent, that its language is clear. Applicant has further amended claim 9 to make it

clear that the 'current value' is the value of the reference field as of the time the record is returned by a query. Since claim 9 as amended now "particularly point[s] out and distinctly claim[s] the subject matter which the applicant regards as his invention", so do dependant claims 10-14 and the amendment of claim 9 has therefore overcome Examiner's rejection of claims 9-14 under 35 U.S.C. 112, second paragraph..

#### Traversal of the rejections of claims 1-19 under 35 U.S.C. 103

When rejecting a claim under 35 U.S.C. 103, Examiner has the burden of establishing a *prima facie* case for the rejection. As set forth at MPEP 2142, to establish the *prima facie* case, Examiner must show the following:

First, there must be some suggestion or motivation . . . to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

In the following, Applicants will set forth in detail why Examiner has failed to meet the third criterion and consequently has not established a *prima facie* case for his rejection of Applicants' claims 1-19.

### What Applicant discloses

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Applicant's system is a process control system that includes a database system. Each process is represented by a record in a process record database table in the database system. A process record (833) has fields that indicate the current state of the process represented by the record. Among these fields are fields that are defined by the user of the process control system. The process control system works by querying the process record database table for process records whose field values satisfy conditions indicated in the query. When a process record is part of a query result, an action is taken with regard to the process. One of the actions that can be taken is setting a field in the process record. The invention is, as set forth in the preamble of the claim,

A graphical user interface for specifying an action to be performed on a field of a record stored in a memory device when a query with which the action is associated

returns the record, the query being executed on a processor that has access to the memory device and interacts with the graphical user interface,

The graphical user interface of the preamble of claim 1 is shown in FIG. 13 and its relationship to the PR record (833) is further described at page 49 line 15. A copy of claim 1 as amended with reference numbers added to relate the claim to the preferred embodiment of FIGs. 8 and 13 follows:

1. (currently amended) A graphical user interface (1301) for specifying an action to be performed on a field of a record (833) stored in a memory device (809) when a query with which the action is associated returns the record (833), the query being executed on a processor (805) that has access to the memory device (809) and interacts with the graphical user interface (1301) the graphical user interface comprising:

a window containing a table (1303) wherein the field of the record (833) has an entry that is selectable by the user (1302), the entry including

a first field of the entry (1303) that identifies the field of the record (833) to be acted on; and

one or more action fields of the entry (1306) that, when the user has selected the entry (1307), the user may set to specify the action (1309).

#### 20 What Texier discloses

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In making his rejections under 35 U.S.C. 103, Examiner combines Texier with Schultz. The abstract of the Texier patent provides an overview of what the patent discloses:

A method of creating data entry forms provides for the display of dialogue-windows on a computer system screen operating in a multi-window graphic mode. The windows are displayed by organizing the windows into one or more pages, each of which can be materialized by one screen window. In each page, at least one active zone, page or part of a page is defined which can react to an external event such as an operator initiated input. The active zone is then associated with a set of "editor" functions, wherein at least one reaction function of the active zone is responsive to activation by an external event or input.

As set forth in the above *Abstract*, what Texier discloses is a GUI for defining elements of a window, not a GUI like Applicant's, which, as set forth in Applicant's claim 1, "specif[ies] an action to be performed on a field of a record stored in a memory device when a query with which the action is associated returns the record, the query being executed on a processor that has access to the memory device and interacts with the graphical user interface".

Given the differences in the purposes of the two GUIs, one would not expect Texier's GUI to disclose any limitations of claim 1 beyond those which are common to GUIs generally. That this in fact the case can be seen by comparing Applicant's FIG. 13 with Texier's FIGs. 1 - 3. As one would expect from its purpose, the GUI of Applicant's FIG. 13 has an entry 1302 for each user-defined field in the record; in entry 1302, field 1303 specifies the name of the user-defined field upon which an action will be performed when the record is returned by a query. A list of possible actions to be performed on the field of a record is shown at 1307 and the specific action shown at 1309.

Texier's FIG. 1 shows a window that has been defined using Texier's GUI. The window in question is used to input employee information to a database, as indicated at "SELECT AN OPERATION". The database operation to be performed is indicated at BASE FILE; at EMPLOYEE INFORMATION is shown the part of the window into which the employee information is to be entered. See Texier, col. 6, lines 5-23 The window of FIG. 1 is thus simply a GUI for directly setting fields in database records, not a GUI for specifying how a named field of a record will be set when the record is returned by a query. Texier's FIG. 2, described at col. 17, line 13-col. 18, line 14, shows Texier's GUI for creating the elements of a window. Texier's FIG 3, described at col. 18. lines 30-60, shows the GUI used in Texier to define the behavior of an object in a window created using the GUI of FIG. 2. These GUIs are thus GUIs for manipulating windows and thus also not a GUI for specifying how a named field of a record will be set when the record is returned by a query. As one would expect from the difference between their purposes and the purpose of Applicant's GUI, none of these GUIs looks anything like the GUI of FIG. 13 and none of them discloses any of the limitations of claim 1.

### 25 What Schultz discloses

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The abstract of the Schultz patent provides an overview of what the patent discloses:

An industrial controller executing a graphical language employs a comparator circuit for monitoring the address locations of memory used to store the control program and its data. A cursor positioned on a graphics representation of the program is used to identify a particular graphical element to be monitored and the address of the starting instruction for that element is loaded into the comparator. An interrupt generated by the comparator causes the generation of a histogram listing the particular rungs name

and the times at which it has been executed, useful for verifying and monitoring the operation of a control program. A snapshot of data values used by the element of the program at the time of its execution may also be stored to verify the condition under which the element executes.

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The lack of any relationship whatever between Schultz's disclosure and what Applicant is claiming becomes immediately apparent when one considers what is meant by the terms "industrial controller" and "control program". As shown in FIG. 1 and described at Schultz col. 4, line 45 - col. 5, line 15, controller 10 controls equipment used to perform an industrial operation. In the example of FIG. 1, controller 10 controls an operation in which containers 40 moving on conveyor 38 are filled with the contents of tank 24. Controller 10 controls the operation of the conveyor belt and the operation of tank 24, which includes controlling operation of a heater 30, a valve 26, and an agitator 28. Controller 10 is itself controlled by a control program, and what Shultz's disclosure concerns is an interface for monitoring the operation of the control program. Again, one would not expect the GUI for Schultz's interface for monitoring the operation of the control program for an industrial controller to bear any resemblance whatever with Applicant's GUI

for specifying an action to be performed on a field of a record . . . when a query with which the action is associated returns the record . . .

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In his rejections of the claims, Examiner finds limitations of Applicant's claims in Schultz's FIG. 5. The problem with this is that FIG. 5 does not disclose a GUI. FIG. 5 is explained at col. 7, lines 37-

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Referring now to FIGS. 1 and 5, data defining each task 80 may be entered by the programmer through the programming terminal 19, or other terminal such as a microprocessor based computer, based on the programmer's knowledge of the overall operation of the controlled equipment 22 and the particular tasks and their criticality. This data is received by a task scheduling table 88 and used by the task control blocks 85.

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As represented schematically, the task scheduling table 88 includes columns indicating a task name, a task priority, a task scheduling type, the task trigger condition, the programs 82 associated with the task, and a watchdog time value. The significance of the data entered into each of these columns may be explained by reference to example tasks forming the rows of the task scheduling table 88 and used to control the equipment 22 of FIG. 1.

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Table 88 is not a GUI, but a schematic representation, and the total disclosure in Schultz of the interface used to input the values contained in table 88 is "data defining each task 80 may be entered by the programmer through the programming terminal 19 or other terminal such as a microprocessor based computer" (lines 37-41).

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The GUI for Shultz's monitoring interface is shown in FIGs. 11 and 15 and described beginning at col.15, line 37 of Schulz. As explained there, the GUI for Schultz's monitoring interface represents the control program as a relay ladder diagram of interconnected contacts and coils (col. 17, lines 14-19). To monitor a portion of the control program, the user moves magnifying glass cursor 330 to the rung in the relay ladder diagram that represents the portion of the program the user wishes to monitor. When the user indicates selection of the rung by hitting a key of the terminal the GUI is being displayed on, the monitoring of the selected rung begins (col. 17, lines 20-29). The results of the monitoring are displayed in subwindow 342 (col. 18, lines 6-18 or in the version of subwindow 342 shown in FIG. 15 (col. 18, lines 19-29). The GUI of FIG. 11 differs fundamentally from Applicant's GUI in that it is *read only*. It can be used to see how the control program is working, but it cannot be used to "specif[y] an action to be performed on a field of a record . . .when a query with which the action is associated returns the record."

Like Texier, Shultz discloses none of the limitations of Applicant's GUI as claimed. FIG. 5 does not disclose a GUI at all and the GUI of FIG. 11 has a purpose which is completely different from that of Applicant's GUI, and as would be expected from that fact, discloses none of the limitations of Applicant's GUI as claimed. Since neither Texier nor Schultz discloses any of the limitations of Applicant's GUI as claimed, Examiner has not made his *prima facie* case and his rejection of Applicant's claims under 35 U.S.C. 103 as obvious over the combination of Texier and Schultz is without foundation.

Detailed discussion of Examiner's rejection of the claims

## Claim 1

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The GUI of Texier's FIG. 1 shows a GUI built by the method of the Texier invention which is used to input data to a field of a record, not a GUI for specifying an operation to be performed on a field of a record when the record is returned by a query

Examiner also cites FIG. 5 of Schultz disclosing one or more action fields that, when the user has selected the entry, the user may set to specify the action. FIG. 5 does not disclose a graphical user interface at all. Because the references do not show all of the limitations of claim 1, Examiner has not established his prima facie case with regard to that claim and claim 1 is patentable over the references, as are claims 2-19 dependent from claim 1. Additionally, however, these claims add limitations which are not disclosed in the references and are consequently patentable in their own rights over the references.

In his rejections of claims 2-3, 5-10, 13-15, Examiner finds at least some of the added limitations in Schultz's FIG. 5. As set forth above, FIG. 5 does not disclose a GUI at all, and consequently, claims 2-3, 5-10, and 13-15 are patentable in their own rights over the references.

## Claim 4

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In his rejection of claim 4, Examiner cites Texier, FIG. 1 "Base File" as disclosing: the user may set the action fields to specify that the identified field be cleared. The reference does not disclose fields being cleared when a record is returned by a query, but a field being cleared in a GUI, and consequently, claim 4 is patentable in its own right over the references.

#### 25 <u>Claim 11</u>

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In his rejection of claim 11, Examiner cites Texier, FIG. 1 "Base File" as disclosing: the reference field operation assigns the current value of the reference field to the identified field. The reference shows that fields within the window can have data inputted and edited, which is the object of the Texier invention. This reference does not disclose a field of a record that will have an action performed on it some time in the future when the record is returned by a query.

Claim

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In his rejection of claim 16, Examiner cites Texier FIG. 1, as disclosing the user may set the action fields to specify a role reference field from which a new person value for the identified field may be obtained, the role reference field referring to an ordered set of person values wherein one of the person values is a last-used person value and the role reference field obtaining the next person value following the last-used person value at the time the record is returned as the new person value for the identified field. FIG. 1 shows fields within the window into which data may be data input and the input data edited, which is the object of the Texier invention. The GUI of FIG. 1 does not set any kind of action fields, let alone action fields which may be set "to specify a role reference field from which a new person value for the identified field may be obtained", as claimed. Claim 16 is consequently patentable in its own right over the references, as are claims 17-19, which add further details concerning setting the action fields.

As regards the "black shading" in FIGs. 9 -17, these figures are screen shots of windows from graphical user interfaces. The black shading indicates highlighted parts of the screen shots. Applicant's attorney has been using screen shots like these to show user interfaces for more than 10 years without objection, and Applicant's attorney believes the practice is sanctioned by 37 C.F.R. 1.84's provision that "Solid black shading areas are not permitted, except when use to represent . . . color." (emphasis added)

Respectfully submitted,

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Date

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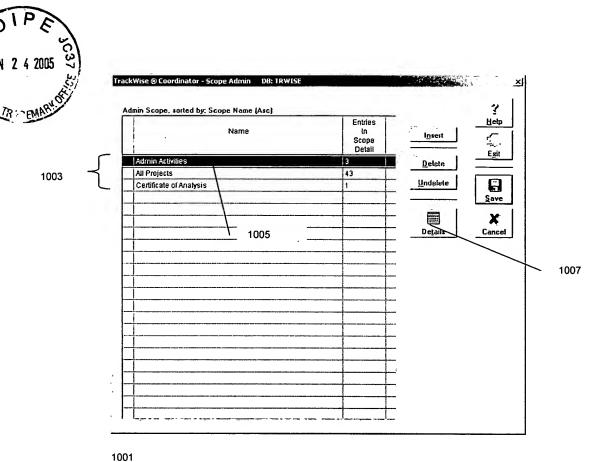
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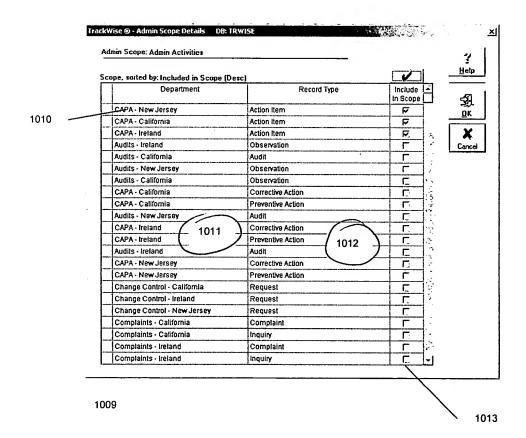
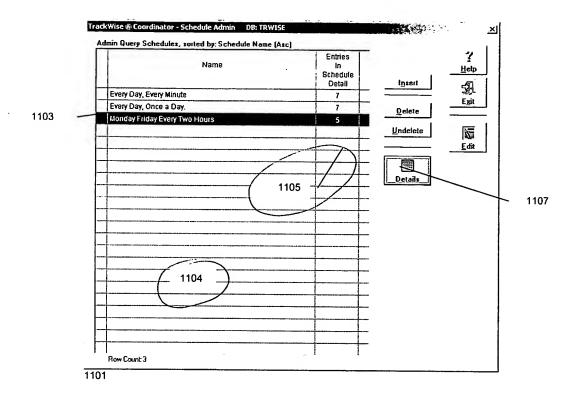


FIG. 10



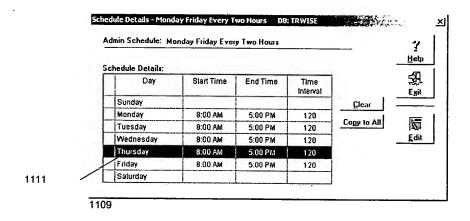


FIG. 11

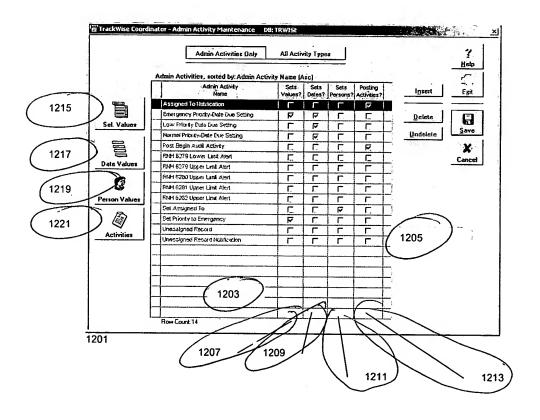
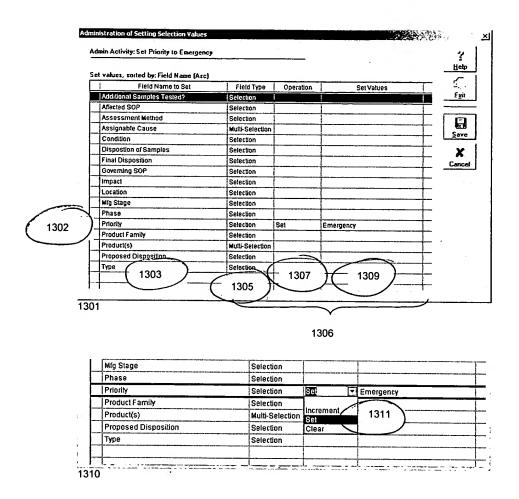
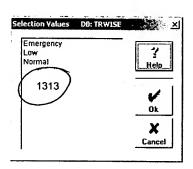


FIG. 12





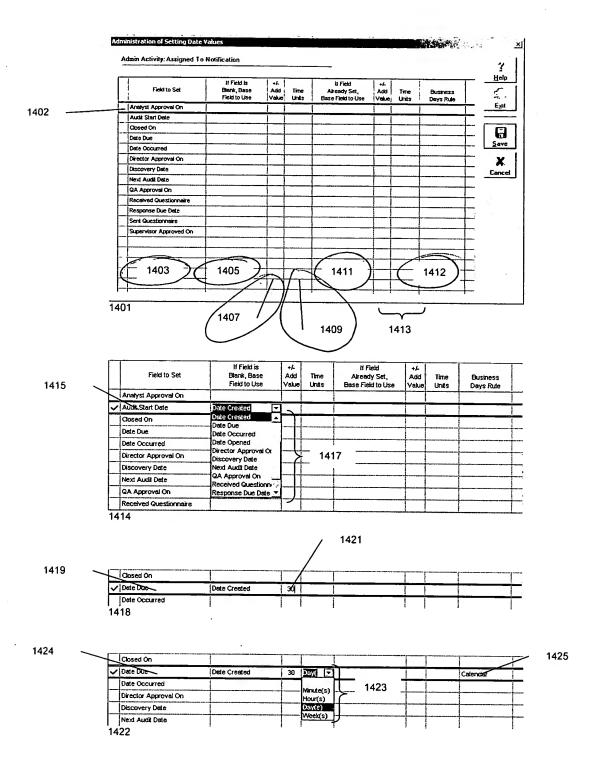
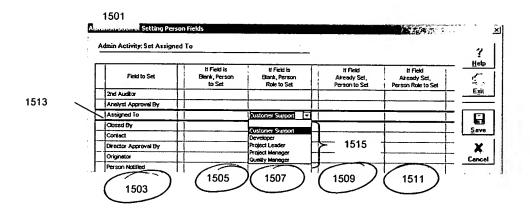
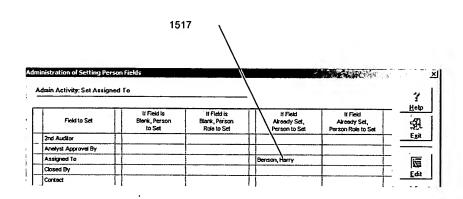
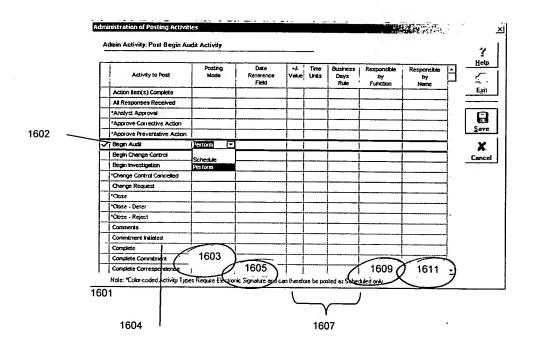
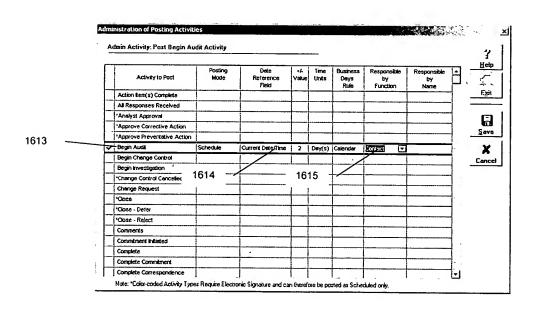


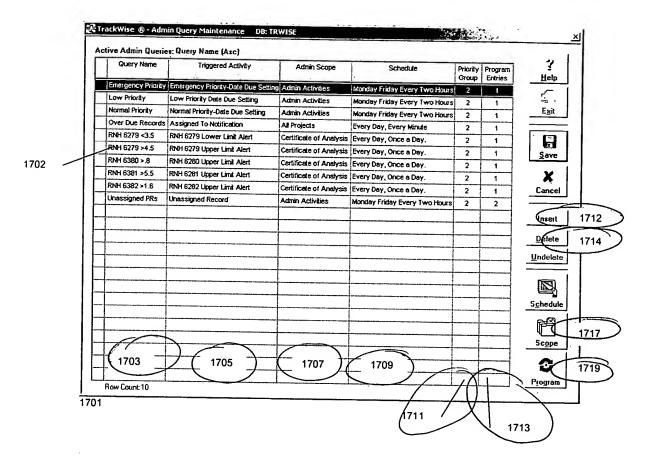
FIG. 14











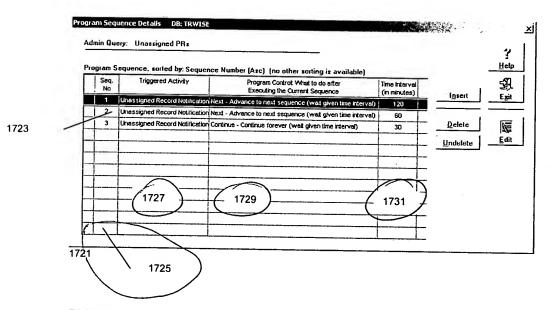


FIG. 17